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## (54) COMPOSITE DIELECTRIC AND CIRCUIT BOARD

(57)Abstract:

PURPOSE: To provide composite dielectric and a circuit board having high dielectric constant and low dielectric loss by coating the surfaces of titanium oxide particles with inorganic hydroxide and/or inorganic oxide and dispersing the particles into resin.

CONSTITUTION: Composite dielectric comprises 95 percentage by weight or more of rutile type titanium oxide particles in whole particles. The surface of titanium oxide is coated by at least one hydroxide or oxide out of Ti, Al, Si, Sn, Zn, Sb. The surface is coated by means of CVD or liquid phase processing method. The mean particle diameter is approximately 0.3-0.15 $\mu$ m, and the volume amount of inorganic coat is set in the range of 1.0 $\times$ 10<sup>-4</sup>-6.0 $\times$ 10<sup>-3</sup>cm<sup>3</sup>/g. These particles are dispersed into resin varnish. Dielectric having both high dielectric constant and low dielectric loss is obtained by way of this constitution.

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